

ABSTRACT

[0041] A system and method for cutting material, adaptable for use with an existing manufacturing device, are disclosed. The system can be adapted to work with existing controllable manufacturing processors and can obtain one or more predetermined dimensions during a manufacturing process and use those dimensions to simultaneously control the manufacturing process while generating a concurrent certification of the predetermined dimensions during the manufacturing process. In an exemplary embodiment the device comprises a milling line; at least one stepper motor useful to control a directional movement of material placed onto the milling line for milling; a mainframe disposed proximate the milling line; at least one protected sensor disposed proximate the mainframe for sensing a predetermined characteristic in real-time such as an edge of the material disposed proximate the mainframe; a controller for issuing stepper motor commands; and a computer operatively in communication with the controller and the sensors. The computer is programmed to receive signals from the measurement sensor; receive the measured predetermined dimensions of the material in real-time from the controller; issue control directives to the controller for use in controlling the stepper motor; and concurrently generate a certification of the measured predetermined dimensions. The method of processing material comprises placing the material onto a milling line for processing; initializing a sensor positioned to sense a measurement of a predetermined characteristic of a predetermined portion of the material; initializing a stepper motor, disposed proximate the line, to a predetermined position; processing the material at a predetermined location along the milling line; sensing

a predetermined characteristic of the material on the milling line; calculating an adjustment of the material in a predetermined plane using the sensed characteristic; sending a signal to the stepper motor based on the calculated adjustment, if the adjustment is non-zero; and retaining the sensed characteristic of the material for certification of the sensed characteristic.

It is emphasized that this abstract is provided to comply with the rules requiring an abstract which will allow a searcher or other reader to quickly ascertain the subject matter of the technical disclosure. It is submitted with the understanding that it will not be used to interpret or limit the scope of meaning of the claims.